



UNITED STATES

DEPARTMENT OF TRANSPORTATION

Office of Intelligence, Security and Emergency Response (S-60)

National Response Program

New Madrid Seismic Zone - Response Overview

Prepared for

USACE Workshop

Louisville, KY

McSpaden

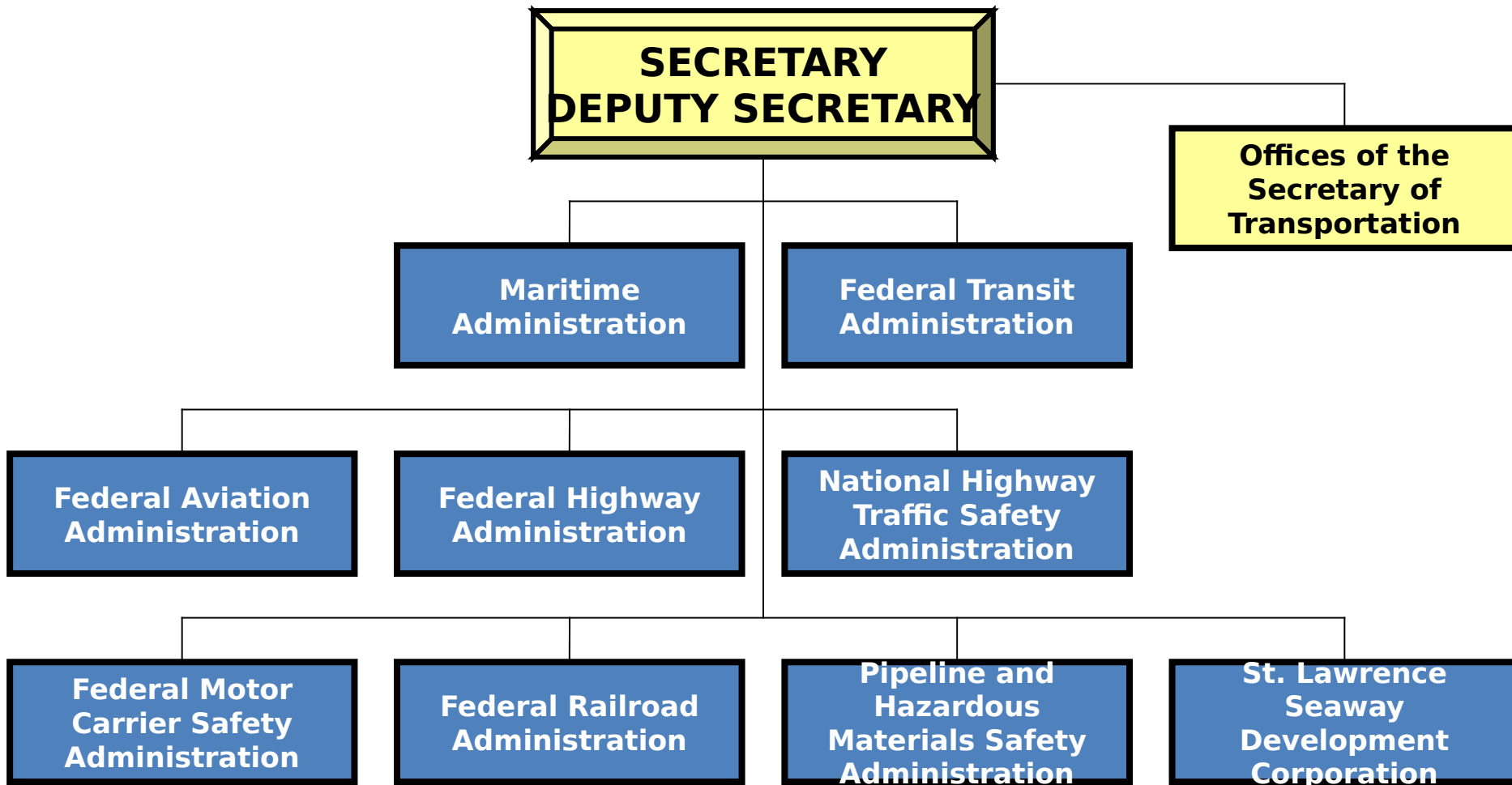
ion 5/7 RETREP/ESF #1 Team Leader

Joseph Duv

Maritime Administration



USDOT Operating Administrations



Emergency Support Function 1

- Monitor and report status of and damage to the transportation system and infrastructure
- Identify temporary alternative transportation solutions that can be implemented by others
- Perform activities conducted under the direct authority of DOT elements
- Coordinate the restoration and recovery of the transportation system and infrastructure
- Coordinate and support prevention, preparedness, response, recovery, and mitigation activities among transportation stakeholders



USDOT Capabilities

Technical Assistance

- NRP Personnel
- Air Navigation Services
- Evacuation Liaison Team
- Joint Damage Assessment Teams
- Emergency Relief Funding

Regulatory Relief

- Federal Motor Carrier Waivers
- HazMat Special Permits
- Oversize/Overweight Permits (facilitate)
- Toll Relief (facilitate)
- Temporary Flight Restrictions
- Railroad Inspection Relief
- Jones Act Waiver Concurrence

Assets

- MARAD Ready Reserve Force
- Operation SafeStor
- Mobile Air Navigation Services assets
- Washington Flight Program

ESF-1: Regional Personnel

Regional Emergency Transportation Coordinator (RETCO)

- Secretary's executive-level regional representative
- Ensure effective regional transportation emergency programs
- Collateral Duty

Regional Emergency Transportation Representative (RETREP)

- Coordinate Federal, State, Local, and Private Sector disaster planning
- Develop a regional ESF-1 response team
- Conduct training and exercises

Regional Emergency Transportation Cadre (RET-C)

- Support ESF-1 mission in variety of locations
- Members of various Operating Administrations
- Collateral Duty

- Lead ESF-1 operations in the RRCC/JFO

Technology

WebEOC:

Web-enabled crisis information management system and provides secure real-time information sharing

DOTMap:

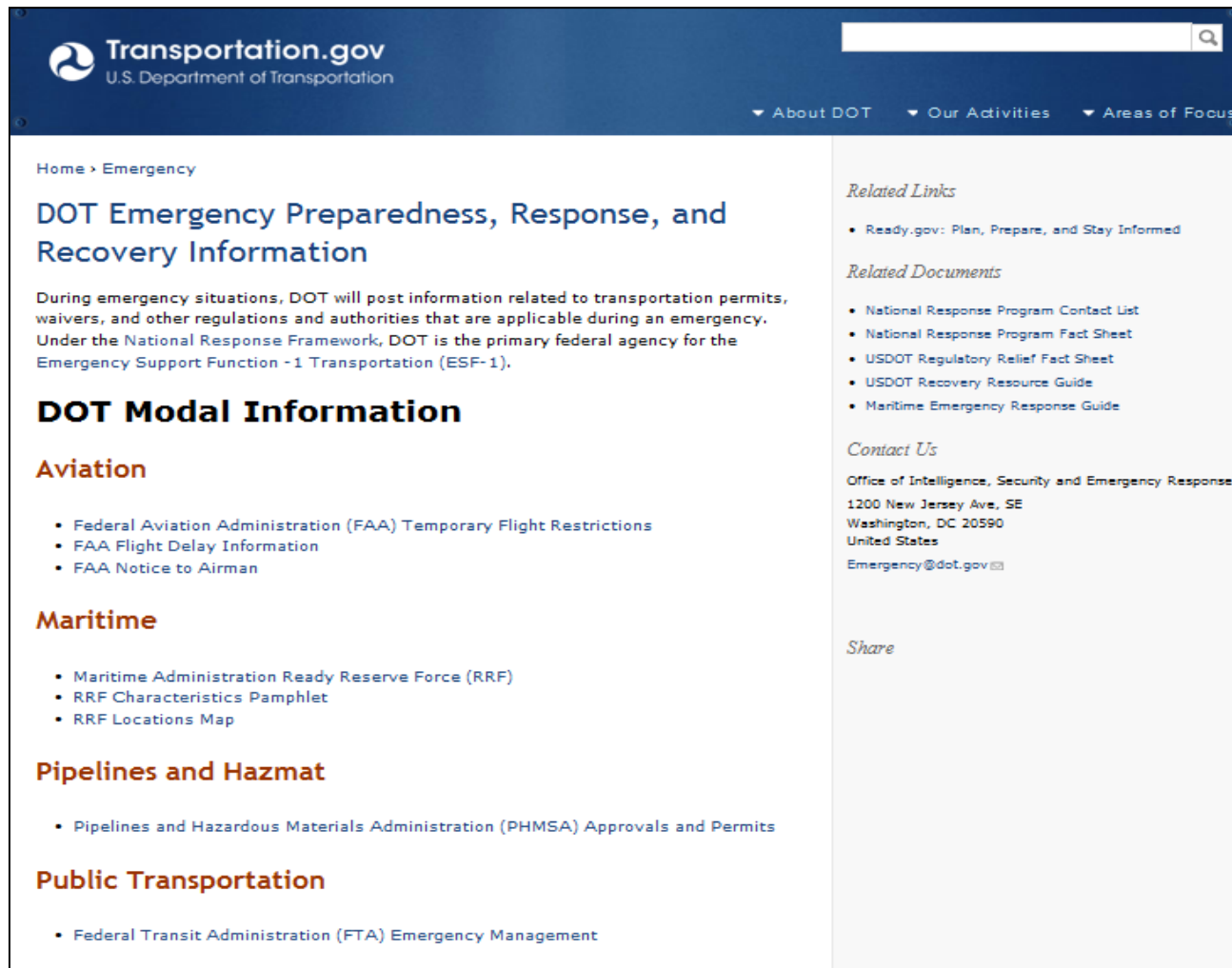
Create, analyze, edit, and print maps to assist in identifying the status of the transportation system

USDOT Emergency Website:

www.dot.gov/emergency

One-stop shop for information related to transportation permits, waivers, and other regulations and authorities that are applicable during an emergency. Also contains links to ESF-1 partners websites.

USDOT Emergency Website



The screenshot shows the USDOT Emergency Website. The header features the Transportation.gov logo and navigation links for About DOT, Our Activities, and Areas of Focus. The main content area is titled 'DOT Emergency Preparedness, Response, and Recovery Information' and includes a paragraph about emergency situations. Below this is a section for 'DOT Modal Information' with sub-sections for Aviation, Maritime, Pipelines and Hazmat, and Public Transportation, each containing a list of links. A right sidebar contains 'Related Links', 'Related Documents', and 'Contact Us' information.

Transportation.gov
U.S. Department of Transportation

Home > Emergency

DOT Emergency Preparedness, Response, and Recovery Information

During emergency situations, DOT will post information related to transportation permits, waivers, and other regulations and authorities that are applicable during an emergency. Under the National Response Framework, DOT is the primary federal agency for the Emergency Support Function -1 Transportation (ESF-1).

DOT Modal Information

Aviation

- Federal Aviation Administration (FAA) Temporary Flight Restrictions
- FAA Flight Delay Information
- FAA Notice to Airman

Maritime

- Maritime Administration Ready Reserve Force (RRF)
- RRF Characteristics Pamphlet
- RRF Locations Map

Pipelines and Hazmat

- Pipelines and Hazardous Materials Administration (PHMSA) Approvals and Permits

Public Transportation

- Federal Transit Administration (FTA) Emergency Management

Related Links

- Ready.gov: Plan, Prepare, and Stay Informed

Related Documents

- National Response Program Contact List
- National Response Program Fact Sheet
- USDOT Regulatory Relief Fact Sheet
- USDOT Recovery Resource Guide
- Maritime Emergency Response Guide

Contact Us

Office of Intelligence, Security and Emergency Response
1200 New Jersey Ave, SE
Washington, DC 20590
United States
Emergency@dot.gov

Share

Contact Information

Jeremy Greenberg
National Response Program Manager
Cell: (202) 591-6592
jeremy.greenberg@dot.gov

David Schilling
Deputy Manager
Cell: (202) 740-5434
david.schilling@dot.gov

Alex Appel
Operations Planner
Cell: (202) 591-5675
alex.appel@dot.gov

24hrs: (202) 366-1863

Jeff McSpaden
Region 5/7 Regional Emergency Transportation
Representative
Cell: (708) 710-9140

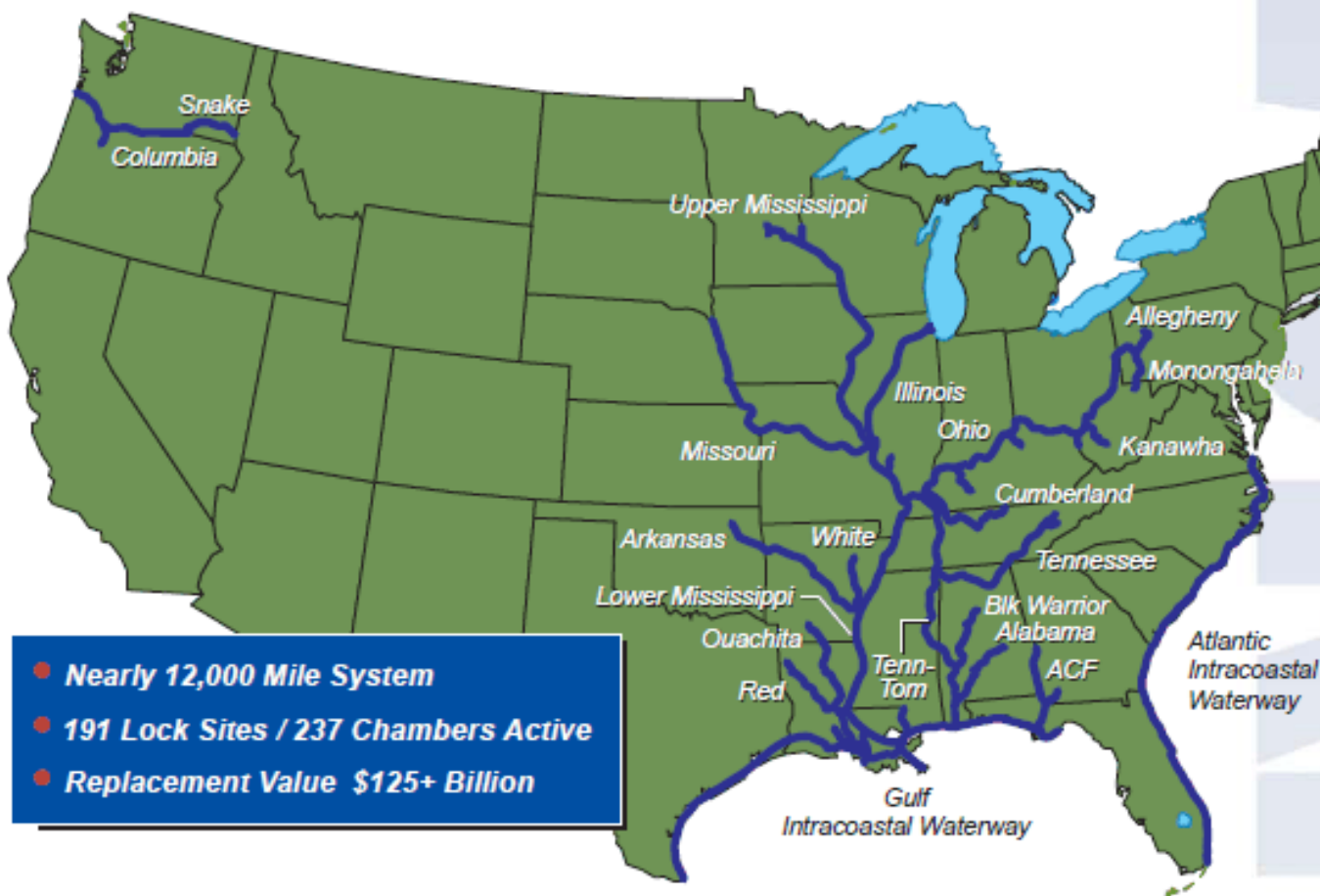
jeff.mcspaden@dot.gov

Maritime Administration

- Mission: To improve and strengthen the U.S. marine transportation system to meet the economic, environmental and security needs of the Nation.
- As part of DOT's efforts to ensure that **the Nation's transportation network is able to quickly recovery after natural disasters or other disaster events**, MARAD supports Emergency Support Function One (ESF-1) structure in accordance with the National Response Framework (NSF) by...
- *...providing key transportation-related information, planning, and emergency management, including prevention, preparedness, response, recovery, and mitigation capabilities...in the maritime sector.*
- www.marad.dot.gov



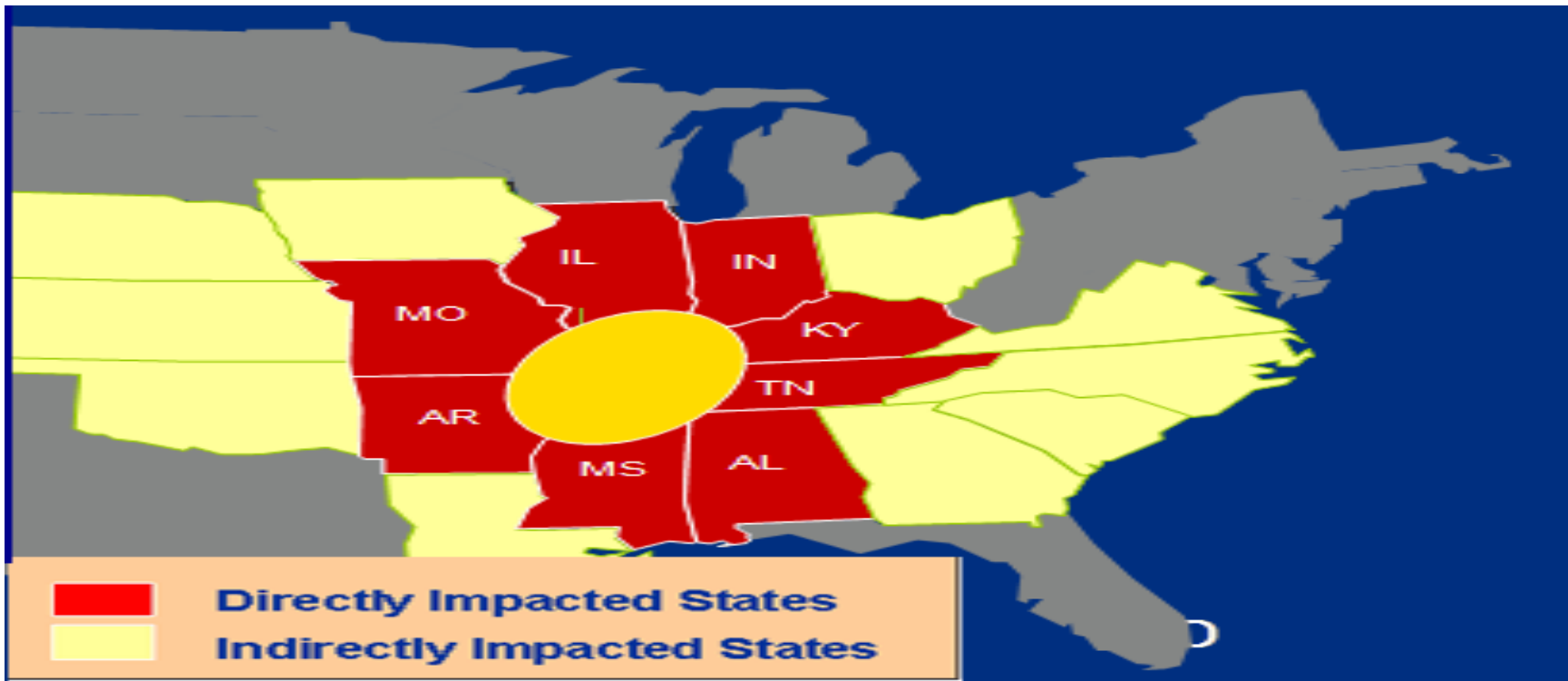
U.S. Inland & Intracoastal Waterways



CUSEC Inland Waterways System damage for a 7.7M

Large area of impact, 126,575 Sq. Miles. **Transportation lifelines**, such as air, highways, **water**, rail and pipelines will be impacted by the initial earthquake and following aftershocks... cascading effects, such as fires, **dam, and**

NMSZ earthquake...



CUSEC Inland Waterways System damage for a 7.7M NMSZ earthquake...

‘An earthquake in the New Madrid seismic zone would have two direct impacts on the Inland Waterways System:

- 1. Seriously impede the navigability of the rivers and canals.**
- 2. Cause serious damages to port facilities.’**



2015

Maritime Issues for a New Madrid Seismic Event

A Compilation of Available Information



Maritime Administration
Department of Transportation



Maritime Issues for a New Madrid Seismic Event contents...

- Overview of the New Madrid Seismic Zone (NMZS)
- Overview of the Inland Waterway System (IWS)
- Discussion of commodities movement on the IWS
- Roles and Responsibilities of the Federal Agencies involved with the IWS;
 - USACE
 - USCG
 - MARAD
- Maritime related Impacts of a NMZS event;
 - Inland Waterways vulnerability
 - Inland Ports vulnerability
 - Economic impact
 - Impact to bridges, dams, levees and navigation locks

Maritime Issues for a New Madrid Seismic Event contents...

- Maritime Response and Recovery Considerations;
 - Most pressing response / recovery objectives
 - Support need to response essential maritime infrastructures
 - How the maritime industry can assist or facilitate response efforts
 - How the Maritime Administration can assist
- Appendices;
 - Inland Waterway Vessel Profiles (By Type)
 - Inland Waterway Port Profiles (By State)
 - Inland Waterway Traffic Profiles (By State)
 - New Madrid Port Damage of M7.7 Event (By State)

Maritime Issues for a New Madrid Seismic Event

contents...

- **Inland Waterway Vulnerability** - "...inland waterways, which are counted on to provide an economical source of transportation for the movement of bulk goods across the region, can suddenly become dysfunctional as a result of an earthquake. Liquefaction could result in large lateral flows that could block channels. Channels can also be blocked by the collapse of bridges. Furthermore, alternative modes of transportation for bulk goods – notably railroad – would also be rendered inoperable for extended periods of time."
- **Inland Ports Vulnerability** - "...the port facilities in the Midwest are going to experience damages – potentially severe damages – depending on the magnitude, location, and duration of the earthquake, and the presence of aftershocks. This will have direct implications for response and recovery efforts . Pre-disaster recovery planning for a New Madrid earthquake also must take into consideration the consequences of loss of function of port facilities, and the associated economic impacts."

Maritime Issues for a New Madrid Seismic Event

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- **Impact to Bridges Crossing Major Rivers** - ‘There are 127 major river crossings located on five rivers (the Mississippi, Ohio, Missouri, Illinois, and Arkansas Rivers) within the eight states of interest in the Central US: Alabama, Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri, and Tennessee.’ Significant bridge damage or collapse following a New Madrid seismic event may impede inland waterway navigation.
- **Impact to Dams and Levees** - ‘If damaged or destroyed, dam and levee failures may disrupt the security, economic health, safety, and welfare of the general public. Significant damage or failure of a dam or levee may impede inland waterway navigation.
- **Impacts to Navigation Locks** - ‘River-based transportation is dependent on functioning locks. The extended loss of function of a lock could be very disruptive as shipment of some materials, such as wheat and coal, are highly dependent on this mode of

transportation in some regions.

Maritime Issues for a New Madrid Seismic Event

Most Pressing Maritime Objectives if a New Madrid Seismic Event Occurs

Inland waterways can suddenly become dysfunctional as a result of an earthquake. Provided below are just a few examples of what should be the foremost maritime-related response and recovery goals:

- Search and rescue for mariners trapped or injured on damaged or capsized vessels on impacted waterways, ports, waterfront facilities and vessels.
- Response to hazardous materials spills / fires from barges and waterfront terminals.
- Stabilization of vessels in danger of capsizing or sinking.
- Inspect status of waterways, locks, navigation channels, navigation aids, ports and terminals.
- Restoration of safe navigation to facilitate initial waterborne response operations as well as allowing salvage / firefighting assets to mobilize to the affected areas.
- Restoration of safe navigation and inland port facilities to re-

Maritime Issues for a New Madrid Seismic Event

contents **Support Needed to Restore Essential Maritime Infrastructure for Response Ops**

Provided below are just a few examples of what support would be needed to restore essential maritime infrastructure:

- Adequate salvage, maritime fire fighting, and hazardous spill response resources. It is difficult to predict whether sufficient salvage and / or firefighting assets would be available in the affected area at time of incident, and waterway navigability may impede these assets from transiting to waterside facilities / vessels.
- Prompt inspection and restoration of locks, navigation channels (clearing debris), and navigation aids by USACE and USCG.
- Locate and secure adrift, capsized, or sunken barges / vessels.
- Assistance with inspection and restoration of terminals / ports to handle transportation of relief supplies / fuel.

Maritime Issues for a New Madrid Seismic Event

How the Maritime Industry Can Assist or Facilitate Response Efforts

- Commercial barges and vessels can store and transport vehicles, bulk relief supplies, fuel, etc...
- Medium and small sized passenger vessels can be used for a wide variety of purposes (*ad hoc prison facility, emergency and recovery worker housing, housing for critical maritime workers (stevedores, oil spill cleanup, etc.), temporary victim housing, evacuation services, etc...*).
- Provide pre-identified, waterside staging areas for response / recovery operations.
- Provide evacuation services for citizens located in impacted areas.
- Provide towboats as command and control platforms for fire, law enforcement, public works / engineering, and medical personnel.
- Provide waterway crossing transits (or barge bridges) for response and recovery personnel, equipment and supplies where bridges may have been destroyed or otherwise rendered unusable.
- Medical Response via Barge - While most barges are typically used for transporting goods along waterways, history reveals that some vessels have been used to provide medical services. Even in recent times, the idea of

Maritime Issues for a New Madrid Seismic Event

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How the Maritime Administration (MARAD) Can Assist

In response to an emergency incident (such as a New Madrid seismic event) impacting the Inland Waterway System, MARAD will actively support the DOT / ESF-1 mission as defined in the National Response Framework:

- MARAD will reach out to elements of the IWS and participate in USCG's MTSRU.
- Assist with prioritization of vessel movements for resumption of commerce.
- Recommend actions to the Capitan of the Port / UIC.
- Assess economic impact of port / waterway / maritime facility closures.
- Track and report on the status of the Marine Transportation System (MTS).
- Provide any known MTS constraints from MARAD's unique, industry perspective.
- Identify critical government-impelled cargos.

joseph.duvall@dot.gov

